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10/575,781	04/14/2006	Marcus Eh	51103	3806
<div>1609 7590 07/21/2010 ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036</div>				
EXAMINER				
BROWN, COURTNEY A				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,781

Applicant(s)

EH ET AL.

Examiner

COURTNEY BROWN

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Acknowledgement of Receipt/Status of Claims

This Office Action is in response to the amendment filed April 29, 2010. Claims 1-14 are pending in the application. Claims 8-14 have been withdrawn as being directed to a non-elected invention. Claims 1-7 are being examined for patentability.

Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

The rejection of claims 1-7 under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US Patent 6,627,763 B2) in view of Anderson et al. (US Patent 6,479,682 B1, referred to as '682') as evidenced by Merriam-Webster's Online Dictionary, (<http://www.merriam-webster.com/>) **is maintained**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention

was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US Patent 6,627,763 B2) in view of Anderson et al. (US Patent 6,479,682 B1, previously cited in the rejection filed June 9, 2009, referred to as '682') as evidenced by Merriam-Webster's Online Dictionary, (<http://www.merriam-webster.com/>).

Applicant's Invention

Applicant claims a method for the spontaneous release of a fragrance having the steps: A.) providing a compound of formula I;



Compound of formula I

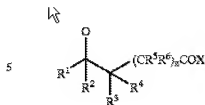
B.) producing a formulation which comprises the compound of formula I and a medium, such that the compound of formula I is stable in the formulation, wherein said medium is acidic and oxidative and has a water content of less than or equal to 10 wt.% relative to the total mass of the medium; and
C.) treating said formulation such that the compound of formula I disintegrates and the fragrance is released.

Determination of the scope and the content of the prior art (MPEP 2141.01)

Anderson et al. teach compounds with protected hydroxy groups of
Formula (Ia, which corresponds to formula I of Anderson et al.):



wherein Y is

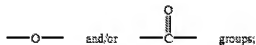


m is an integer of 1 or greater; n is 1, 2 or 3;

R1, R2, R3, R4, R5 and R6 represent independently

hydrogen, substituted or unsubstituted alkyl-, alkenyl-, alkynyl-, cycloalkyl-,

cycloalkenyl- or aromatic radicals which can additionally contain one or more



whereby one or two rings can be built by the combination of the

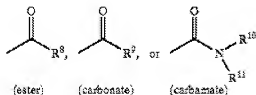
respective R1 to R6 groups and these ring(s) can be substituted with

one or more alkyl group; X is -OR7 and R7 is the residue of an

alcohol R7OH, or the residue of the enol form of an aldehyde or ketone,

or X is a primary or secondary amino group forming an amide;

Z is



q is the same or greater than m; R8 is hydrogen, a straight or branched,

unsubstituted or substituted alkyl-, alkenyl-, cycloalkyl-, cycloalkenyl- or aromatic radical which optionally includes and/or is substituted with one or more heteroatoms, and/or group(s) including a heteroatom, preferably by --CO--, OCOR⁷, COOR⁷, COY, Si and/or N; R⁹ is the residue --OR¹² of an alcohol of formula R¹² OH or the residue of the enol form of an aldehyde or ketone or has the definition given for Y and R⁹ where Y can be the same or different and optionally includes and/or is substituted with a heteroatom, and/or group(s) including a heteroatom; R¹⁰ and R¹¹ represent independently hydrogen, substituted or unsubstituted alkyl, alkenyl, cycloalkyl, cycloalkenyl or an aromatic residue which optionally includes and/or is substituted with one or more heteroatoms, and/or group(s) containing a heteroatom (column 2, line 60 bridging to column 2, lines 1-56).

These compounds are **precursors for organoleptic agents**, such as fragrances, and masking agents and for antimicrobial agents. When activated, the compounds of formula (Ia) are cleaved and form one or more organoleptic and/or antimicrobial compounds (abstract). The compounds of formula (Ia) are virtually odorless under room temperature, atmospheric conditions and about 20 to 100% relative humidity. However, under activating conditions, they are cleaved and one or more active compounds with organoleptic and/or antimicrobial properties are generated. Anderson et al. teach that the phrases "activating conditions" or "activated" are used interchangeably and are intended to mean those conditions which lead to cleavage of the compounds of formula (Ia) and the formation of "active," i.e., organoleptic and/or

antimicrobial agents. For example, the following activating conditions lead to cleavage of compounds of formula (Ia) and to formation of the desired active compounds: skin bacteria, especially axilla bacteria; enzymes such as protease or lipase; elevated temperature; **acidic or alkaline pH-values**; and/or light (column 3, lines 4-20). The compounds of formula (Ia) may be employed as fragrance precursors in a variety of compositions, including, for example, **personal care products, laundry products, cleaning compositions**, pet care products and environment scents such as air fresheners (column 5, line 65 bridging to column 6, lines 1-5). When the compounds of formula (I) are employed as fragrance precursors and precursors for odor masking agents, they are present in such compositions individually in an amount effective to enhance or to mask the characteristic odor of a material. More commonly, however, the compounds are mixed with other fragrance components in an amount sufficient to provide the desired odor characteristics. Due to the **in situ** generation of the active compounds, Anderson et al. teach that the desired effect is prolonged and the substantivity on different substrates is enhanced (column 6, lines 8-18). Upon cleavage, the compounds of formula (Ia) form lactones and optionally **aldehydes** (column 3, lines 20-23 of Anderson et al.) such as **decanal, dec-9-enal, dec-4-enal, and octanal** as listed on page 10 of the instant specification (compounds of instant formula I, column 6, lines 25 bridging to column 7, line 29 of Anderson et al.) and/or **ketones** (column 3, lines 20-23 of Anderson et al.) such as **carvone and acetophenone** as listed on page 11 of the instant specification (compounds of instant formula I, column 6, lines 25 bridging to column 7, line 29 of Anderson et al.).

According to Webster's Online Dictionary, "**In situ**" means: in the natural or original position or place. According to Webster's Online Dictionary, "**spontaneous**": means: **1** : proceeding from natural feeling or native tendency without external constraint ; **2** : arising from a momentary impulse; **3** : controlled and directed internally ;**4** : produced without being planted or without human labor; **5** : developing or occurring without apparent external influence, force, cause, or treatment and **6** : not apparently contrived or manipulated. Thus, it is the Examiner's position that the "in situ" generation of the active compounds of Anderson et al. is a spontaneous event.

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Anderson et al. is that Anderson et al. do not expressly teach a method of producing a formulation which is comprised the compound of instant formula I in a medium has a water content of less than or equal to 10 wt% relative to the total mass of the medium. This deficiency in Anderson et al. is cured by Anderson et al.(i.e., '682'). '682' teaches methods and compositions comprising compounds of instant formula I to provide compounds which are precursors for organoleptic compounds such as fragrance or masking agents (column 1, lines 13-16) that are cleaved under different activating conditions and are stable under transport and storage conditions (column 1, lines 51-57).

Regarding the amount of water present in the instant sour and oxidative medium, Anderson et al. teach water in amounts less than 10% . This includes amounts all the

way to 0% (see example 55a and 55b, column 23 bridging to column 24, lines 1-44).

One of ordinary skill in the art would have been motivated to utilize water in low amounts based on the teachings of Anderson et al. It would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges for water that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the two cited references to arrive at a method for the release of a fragrance in an acidic and oxidative medium that has a water content of less than or equal to 10 wt% relative to the total mass of the medium. One of ordinary skill in the art would have been motivated to make this combination with the expected benefit of having a method to provide fragrant precursors in more than one type of composition that can be used for an array of products. Further, both references provide methods for the release of a fragrance using the same fragrance precursor compositions. Thus, in view of *In re Kerkhoven*, 205 USPQ 1069 (C.C.P.A. 1980), it is *prima facie* obvious to combine two or more compositions each of which is taught by prior art to be useful for the same purpose in order to form a third composition that is to

be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in prior art, thus claims that requires no more than mixing together two or three conventional fragrance precursor compositions set forth *prima facie* obvious subject matter.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Examiner's Response to Applicant's Remarks

Applicant's arguments filed on April 29, 2010, with respect to the 103 rejection of claims 1-7 under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US Patent 6,627,763 B2) in view of Anderson et al. (US Patent 6,479,682 B1, referred to as '682') as evidenced by Merriam-Webster's Online Dictionary, (<http://www.merriam-webster.com/>) have been fully considered but they are not persuasive. With respect to Anderson '763, Applicant argues that although disclosing "in situ" generation of the

active compounds nowhere does it disclose or suggest a spontaneous release.

Applicant argues that the in situ generation of Anderson '763 is to provide a "desired effect [that is] prolonged." (Col. 6 at line 17, emphasis added) and that Anderson '763 goes on to specifically detail that "the compounds of the invention provide a slow release of the active agents." (Col. 6 at lines 21-22, emphasis added). Thus, Applicant concludes that not only does Anderson '763 fail to disclose or suggest spontaneous release, it actively teaches against this by providing for a slow release of the active ingredients. However, the Examiner disagrees with Applicant's arguments because as stated in the Office Action of February 19, 2010, according to Webster's Online Dictionary, "In situ" means: in the natural or original position or place. According to Webster's Online Dictionary, "spontaneous": means: 1 : proceeding from natural feeling or native tendency without external constraint ; 2 : arising from a momentary impulse; 3 : controlled and directed internally ; 4 : produced without being planted or without human labor; 5 : developing or occurring without apparent external influence, force, cause, or treatment and 6 : not apparently contrived or manipulated. Thus, the Examiner maintains the position that the "in situ" generation of the active compounds of Anderson et al. is a spontaneous event. Applicant appears to be confusing the word "spontaneous" with "instantaneous" but the two words do not have the same meaning. A spontaneous event can occur in any time frame while an instantaneous event occurs instantly. Regarding Anderson et al. teaching that the compounds of the invention provide a slow release of the active agents (Col. 6 at lines 21-22), it is the Examiner's position that the definition of spontaneous does not have the same meaning of "rapid or

fast" but rather "proceeding from natural feeling or native tendency without external constraint" as disclosed by Webster. Thus, the Examiner concludes that Anderson '763 does disclose or suggest spontaneous release because Anderson et al. teach due to the in situ generation of the active compounds as instantly claimed and according to Webster's Online Dictionary, "In situ" means: in the natural or original position or place and "spontaneous": means: 1 : proceeding from natural feeling or native tendency without external constraint. It is duly noted that the claimed method of release and the composition of the prior art is the same as Applicant's. Thus, the skilled artisan would recognize that a composition is inseparable from its properties and when treated in the same manner as instantly claimed, the compounds will spontaneously release a fragrance.

With respect to Anderson '682, Applicant argues that it also discloses "in situ" generation of active compounds but to provide a "desired effect [that is] prolonged." (Col. 6, lines 7-8) and that Anderson '682 goes on to specifically detail that "the compounds [of] the invention provide a slow release of the active agents" similar to Anderson '763. (Col. 6, lines 12-13). Thus, Applicant concludes that not only does Anderson '682 fail to disclose or suggest spontaneous release, it actively teaches against this by provided for a slow release of the active ingredients. However, the Examiner disagrees with Applicant's arguments because as stated in the Office Action of February 19, 2010, the Examiner stated that according to Webster's Online Dictionary, "In situ" means: in the natural or original position or place. According to Webster's Online Dictionary, "spontaneous": means: 1 : proceeding from natural

feeling or native tendency without external constraint ; 2 : arising from a momentary impulse; 3 : controlled and directed internally ; 4 : produced without being planted or without human labor; 5 : developing or occurring without apparent external influence, force, cause, or treatment and 6 : not apparently contrived or manipulated. Thus, the Examiner maintains the position that the "in situ" generation of the active compounds of Anderson et al. is a spontaneous event. Regarding Anderson et al. teaching that the compounds of the invention provide a slow release of the active agents, it is the Examiner's position that the definition of spontaneous does not have the same meaning of "rapid or fast" but rather "proceeding from natural feeling or native tendency without external constraint" as disclosed by Webster. Thus, the Examiner concludes that Anderson '763 does disclose or suggest spontaneous release because Anderson et al. teach due to the in situ generation of the active compounds as instantly claimed and according to Webster's Online Dictionary, "In situ" means: in the natural or original position or place and "spontaneous": means: 1 : proceeding from natural feeling or native tendency without external constraint. It is duly noted that the claimed method of release and the composition of the prior art is the same as Applicant's. Thus, the skilled artisan would recognize that a composition is inseparable from its properties and when treated in the same manner as instantly claimed, the compounds will spontaneously release a fragrance.

Applicant argues that the present invention allows the release of fragrances in a surprisingly spontaneous manner. For example, Applicant points to Table 2 of the instant specification and states that the fragrance precursors showed spontaneous

hydrolysis with virtually 100% of the maximum aldehyde concentration being formed from the fragrance precursors after 5 minutes. Applicant argues that the fast or spontaneous release is in contrast to the "slow" release of the cited art which is a disadvantage that Applicants' discuss in the originally filed application at page 4, lines 5-16 ("[t]he prior art acknowledged above shows that...release the aldehyde or the ketone slowly"). However, the Examiner disagrees with Applicant's argument because Applicant is claiming a method of producing a formulation which comprises the compound of instant formula I and a medium, such that the compound of formula I is stable in the formulation, wherein said medium is acidic and oxidative and has a water content of less than or equal to 10 wt.-% relative to the total mass of the medium, and treating said formulation such that the compound of formula I disintegrates and the fragrance is released. Anderson et al. teach the compounds of instant formula I as **precursors for organoleptic agents**, such as fragrances, and masking agents and for antimicrobial agents. When activated, Anderson et al. teach that the compounds of formula (I) are cleaved and form one or more organoleptic and/or antimicrobial compounds (abstract). The compounds of formula (I) are virtually odorless under room temperature, atmospheric conditions and about 20 to 100% relative humidity. However, under activating conditions, they are cleaved and one or more active compounds with organoleptic and/or antimicrobial properties are generated. Anderson et al. teach that the phrases "activating conditions" or "activated" are used interchangeably and are intended to mean those conditions which lead to cleavage of the compounds of formula (I) and the formation of "active," i.e., organoleptic and/or antimicrobial agents. For

example, the following activating conditions lead to cleavage of compounds of formula (I) and to formation of the desired active compounds: skin bacteria, especially axilla bacteria; enzymes such as protease or lipase; elevated temperature; **acidic or alkaline pH-values**; and/or light (column 3, lines 4-20). The claimed method of release and the composition of the prior art is the same as Applicant's. Thus, the skilled artisan would recognize that a composition is inseparable from its properties and when treated in the same manner as instantly claimed, the compounds will spontaneously release a fragrance as instantly claimed.

Conclusion

The claims remain rejected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 1616

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney A. Brown whose telephone number is 571-270-3284. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Courtney A. Brown
Patent Examiner
Technology Center 1600
Group Art Unit 1616

/Ernst V Arnold/
Primary Examiner, Art Unit 1616